

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-16. (Cancelled).

17. (Currently Amended) A method of operating a combustion system having an electrostatic precipitator (ESP) and a selective catalytic reduction (SCR) system to lowering the acid dewpoint temperature of flue gas and optimize ESP function, the method comprising the steps of:

- a) determining if the SCR system is to be by-passed;
- b) by-passing the SCR system if the SCR system is determined to be by-passed;
- c)a) partially combusting the fuel in a first stage to create a chemically reducing environment in situ;
- d)b) adjusting the reducing environment for a sufficient time period such that the flue gas acid dewpoint is lowered to a desirable level by reducing reducible acids SO₃ formed during combustion to SO₂ by electron addition to create an SO₃ concentration configured to improve ESP function;
- e) combusting the remainder of the fuel and combustion intermediates in a second stage with oxidizing environment, wherein residence time in the oxidizing environment is selected to maintain the SO₃ concentration substantially within a range desirable for ESP function;
thereby lowering the acid dewpoint temperature of the flue gas by reducing the acid concentration of the flue gas and optimizing ESP function.

18. (Original) The method of claim 17, further including the step of micro-staging the first stage fuel combustion.

19.(Original) The method of claim 18, wherein the micro-staging is provided through the use of low-NO_x burners.

20.(Original) The method of claim 17, further including the step of macro-staging the first stage of fuel combustion.

21.(Original) The method of claim 20, wherein the macro-staging is provided through the use of over-fired air.

22.(Original) The method of claim 17, further including a combination of micro-staging and macro-staging.

23.(Original) The method of claim 22, wherein the micro-staging is provided by low-NO_x burners and the macro-staging is provided by over-fired air.

24.(Original) The method of claim 17, wherein the fuel is coal.

25.(Previously Presented) A method of operating a combustion system having an electrostatic precipitator (ESP) and a selective catalytic reduction (SCR) system, the method lowering the acid dewpoint temperature of flue gas, comprising the steps of:

- a) partially combusting the fuel in a first stage to create a chemically reducing environment in situ;
 - b) combusting the remainder of the fuel and combustion intermediates in a second stage with oxidizing environment;
 - c) measuring the acid dewpoint of the flue gas;
 - d) determining if the SCR system is in operation;
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- e) if the SCR system is not in operation, adjusting the reducing environment for a sufficient time period such that SO₃ formed during combustion is reduced to SO₂ by electron addition to create an SO₃ concentration

configured to improve ESP function the flue gas acid dewpoint is lowered to a desirable level; thereby decreasing the acid dewpoint temperature of the flue gas and optimizing ESP function by reducing the reducible acid concentration of the gas by electron addition.

26.(Original) The method of claim 25, further including the step of micro-staging the first stage fuel combustion.

27.(Original) The method of claim 26, wherein the micro-staging is provided through the use of low-NO_x burners.

28.(Original) The method of claim 25, further including the step of macro-staging the first stage of fuel combustion.

29.(Original) The method of claim 28, wherein the macro-staging is provided through the use of over-fired air.

30.(Original) The method of claim 25, further including a combination of micro-staging and macro-staging.

31.(Original) The method of claim 30, wherein the micro-staging is provided by low-NO_x burners and the macro-staging is provided by over-fired air.

32.(Original) The method of claim 25, wherein the fuel is coal.

33.(New) The method of claim 17, wherein SO₃ concentration is adjusted to about 15 to 20 ppm.

34.(New) The method of claim 25, wherein SO₃ concentration is adjusted to about 15 to 20 ppm.